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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,098	10/12/2001	Daniel J. Coonen	S01.12-0821/STL 10313	1688

7590 12/18/2003  
Westman Champlin & Kelly  
900 Second Avenue South  
Suite 1600 - International Centre  
Minneapolis, MN 55402-3319

EXAMINER

NEGRON, DANIEL L

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 12/18/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/977,098

Applicant(s)

COONEN, DANIEL J.

Examiner

Daniell L. Negrón

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 6) ☐ Other: \_\_\_\_\_

DETAILED ACTION

*Information Disclosure Statement*

1. The information disclosure statement (IDS) submitted on October 12, 2001 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

*Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Gold U.S. Patent No. 5,475,540.

Regarding claims 1 and 7, Gold discloses a data storage device for storing and accessing data in tracks in on a medium having a data layout comprising a first, second, and third data section (see Figs. 2A and 2B).

Gold also discloses a first spin pad located between the first and second data section and having a first data length (see Fig. 2B).

Finally, Gold also discloses a second spin pad (Fig. 2B, element 48) located between the second and third data section and having a second length that is different from the first length (see Fig. 2B and column 4, line 58 through column 5, line 20).

Art Unit: 2651

Regarding claim 2, Gold discloses a data storage device wherein the data layout further comprises a reference mark (e.g. address mark) before the data section (see Fig. 2B, element 44 and associated description).

Regarding claim 6, Gold discloses a data storage device wherein the first data section comprises a data block (see Fig. 2B, element 42-0).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5, 8-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gold U.S. Patent No. 5,475,540 in view of Maeda U.S. Patent No. 5,678,022.

Regarding claims 3-5, Gold discloses a data storage device with all the limitations of claim 2 as described above. Gold however fails to mention determining the length of the pad based on a function of the distance from the reference mark to a beginning of the first pad based on a worst-case delay.

However, Maeda discloses a data-formatting device wherein a pad (e.g. gap) length is established by determining the length of the data section associated with the pad (see Fig. 6 and column 4, lines 35-48) in an optimum i.e. best case for the purpose of speeding up data processing while minimizing switching between data sections. Subsequently, the following pad lengths are established based on the lengths of the following data sections.

Art Unit: 2651

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the device disclosed by Gold with the teachings of Maeda in order to obtain a data storage device with faster data processing and further improving data density of the medium.

Regarding claim 16-20, Gold discloses a data storage medium capable of storing data and having a track layout comprising a first and second data section with overwrite protection means in the layout for preventing the first and second data section from overwriting based in part on the length of the first data section which comprises a reference mark (e.g. address mark) (Figs. 2A and 2B). Gold further teaches that pads are placed between data sections to protect following sections from effects of switching from a write mode to a read mode. Gold however fails to mention an overwrite protection based in part on the length of the first data section comprising a pad and further determining the length of the pad utilizing a linear function.

However, Maeda discloses a data-formatting device wherein a pad (e.g. gap) length is established by determining the length (i.e. bytes) of the data section associated with the pad (see Fig. 6 and column 4, lines 35-48) for the purpose of speeding up data processing while minimizing switching between data sections. Subsequently, the following pad lengths are established based on the lengths of the following data sections. Furthermore, Maeda teaches that the length of the pad is determined by applying a linear function through multiplying a value by the length of the data section (column 4, lines 35-50).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the device disclosed by Gold with the teachings of Maeda in

Art Unit: 2651

order to obtain a data storage medium with faster data processing and further improving data density of the medium.

Regarding claim 21, Maeda discloses a data storage medium wherein the first data section comprises a data block (see Figs. 6 and 9 and column 6, lines 19-30).

Regarding claim 22, claim 22 has limitations similar to those treated in the rejection of claim 7 and is met by the reference as discussed above.

Regarding claims 8-15, method claims 8-15 are drawn to the method of using the corresponding apparatus claimed in claims 16-22. Therefore method claims 8-15 correspond to apparatus claims 16-22 and are rejected for the same reasons of obviousness as used above.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:


Strout et al U.S. Patent No. 4,001,883 and Kikuchi et al U.S. Patent No. 6,181,498 are cited for disclosure of methods of including gaps in a data layout and pads of variable length.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 703-305-6985. The examiner can normally be reached on Monday-Friday (8:30-6:00) Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 703-308-4825. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 2651

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

DLN   
December 11, 2003

  
**DAVID HUDSPETH**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**